

LLW Repository Ltd Joint Waste Management Plan

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LLW Repository Ltd

Joint Waste Management Plan

2018/19 to 2022/23

Document Management

Rev.	Issue Date	Description	Prepared by	Checked by	Approved by
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Change Log

This change log identifies the key changes to the JWMP from the previous iteration.

Page No.	Change	Reason for change
9-10	Benefit Map updated.	To reflect progress in project delivery.
11-19	Projects in the transformational activity tracker revised, Completion dates changed for: -13.09, 13.13, 13.15, 13.20, 13.21, 13.22, 13.24, 13.30, 13.31, 13.32 Projects deleted due to completion: - 13.03, 13.14, 13.17, 13.19, 13.23, 13.33, 13.34	To reflect progress in project delivery.
27	Revised forecast and benefit tracker.	Changes in forecast arisings for next five years.
28	Waste forecast assumptions.	Assumptions for the waste forecast included to provide additional clarity and context to the numbers on page 27.

Glossary

This glossary provides definitions for acronyms and abbreviations used in this document.

Term	Definition
BAT	Best Available Technique
EA	Environment Agency
ESC	Environmental Safety Case
FED	Fuel Element Debris
HAW	Higher Activity Waste
ILW	Intermediate Level Waste
IPT	Integrated Project Team
IRWP	Integrated Radioactive Waste Programme
IWM	Integrated Waste Management
JWMP	Joint Waste Management Plan
KM	Knowledge Management
LFE	Learning from Experience
LLW	Low Level Waste
LLWR	Low Level Waste Repository
NDA	Nuclear Decommissioning Authority
NSD	Near Surface Disposal
NWP	National Waste Programme
PCM	Plutonium Contaminated Material
RDP	Repository Development Programme
SLC	Site Licence Company
SNM	Special Nuclear Material
UKRWI	UK Radioactive Waste Inventory
VLLW	Very Low Level Waste
WAGR	Windscale Advanced Gas-cooled Reactor
WCI	Waste Consignment Information Form
WIF	Waste Inventory Form
WMS	Waste Management Services

Executive Summary

A Joint Waste Management Plan (JWMP) is a proactive management plan for the next 5 years that has been developed by the Site Licence Company (SLC) in conjunction with LLW Repository Ltd. Its purpose is to demonstrate how the SLC is engaging with the National LLW Programme to improve their implementation of and compliance with the UK Low Level Waste (LLW) Strategy, through the delivery of the Programme Blueprint.

This JWMP provides an overview of the SLC's current arrangements (Section 1) for managing their LLW arisings and identifies the transformational activities (Section 2) that they are undertaking, either independently or in collaboration with LLW Repository Ltd and other organisations, to make a step change in their LLW management arrangements to deliver the National Programme Blueprint future state. Section 3 provides an opportunity to identify specific step change projects that are not within the current scope of work but which could be undertaken either if funding became available or if internal or collaborative resource could be identified to support the project. Appendix 1 contains the forecast of arisings by waste route for the next five years and Appendix 2 provides a summary of the benefits identified as a result of using the diversion routes.

This JWMP has been agreed by senior management as a commitment to the delivery of the activities listed within. Key transformational activities will be tracked within the National Programme governance arrangements to:

- Assess performance.
- Highlight success.
- Deliver an integrated approach to dealing with the UK's LLW.

It contains activities and waste forecasts for the 5 year period of 2018/19 to 2022/23.

Section 1 LLW Repository Ltd LLW Management Delivery Activities

LLW Repository Ltd is responsible for the delivery of:

- The safe and effective management of the LLW Repository site, the UK's only national LLW repository.
- The development and provision of access to a range of waste routes, through the Waste Management Services team, to support waste consignors in their implementation of the National LLW Strategy.
- Leading the implementation of the National LLW Strategy through the National Waste Programme (NWP).

Repository Site

The LLWR site delivers the day-to-day management of LLW in a number of different ways – the site is both a waste management facility of national significance (as the UK's only national repository for LLW) and a waste producer.

In its role as a waste management facility, the site receives, monitors, grouts and disposes of solid LLW received from waste consignors across the UK. Delivery activities associated with this include: the operations to receive, treat and dispose of LLW in the repository; operations to manage the disposal trenches and vaults (including leachate management); asset care and maintenance of site facilities and infrastructure; and day-to-day management of the safety cases (nuclear, operational and environmental) associated with the facility.



The LLWR site is also a waste producer. The site generates LLW from a number of programmes being delivered on-site, including the Security Enhancement Programme, the Plutonium Contaminated Material (PCM) Decommissioning Programme, the Repository Development Programme and the Repository Infrastructure Programme.

In FY 18/19, LLWR are investing significant effort on the PCM Delivery Programme; from sample dispatches to waste export and consignment. 'Waste walkrounds' have been introduced on site with the aim of aiding waste routing, and to prevent the accumulation of waste in a number of different areas.

Day-to-day management of LLW arisings generated by the site involves opening new waste routes; safely transferring waste consignments off-site for treatment; inventory and forecasting management; characterisation; activity calculations; provision of waste management advice / guidance to site projects and operations; and participation in the National Programme. Recognising that there has been a significant change over the past few years in the volume and diversity of LLW being produced at this site, an important

programme of work has been undertaken to overhaul and enhance the LLW management arrangements at the LLWR site.

The Environmental Safety Case (ESC) was submitted in 2011 to the Environment Agency (EA). A revised Environmental Permit was issued in November 2015 and planning consent was granted in July 2016. Work is ongoing on review and update of the site ESC. The Repository Development Programme commenced in FY17/18, with design, enabling works and stakeholder / community engagement, with the aim of capping Vault 8.

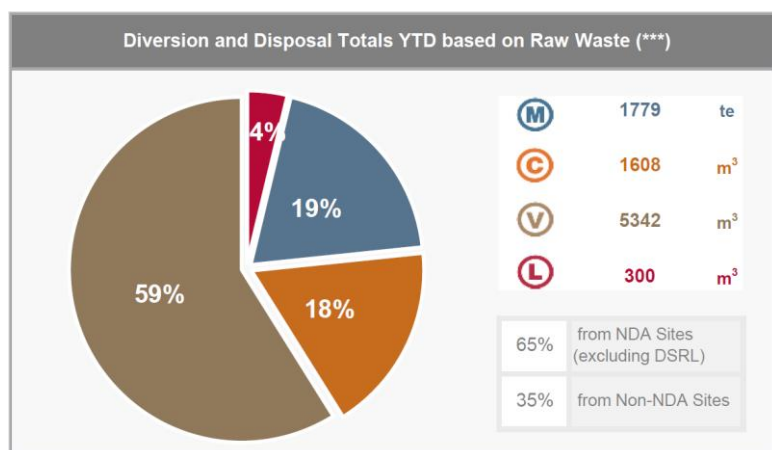
Waste Management Services



The Waste Management Services (WMS) organisation exists to facilitate and support the implementation of the UK Low Level Waste Strategy through the development and provision of routes for different types of LLW. WMS provides commercial access for waste consignors across the UK to routes for metallic waste treatment / recycling, thermal treatment, disposal of Very Low Level Waste (VLLW) at suitably permitted licensed landfill sites, supercompaction of soft waste, disposal of LLW at the LLWR site and enabling services (characterisation, sort & segregation, packaging and transport).

These routes, with the exception of LLW disposal, are provided by commercial organisations working with LLW Repository Ltd. On a day-to-day basis, WMS works with customers (waste producers across the UK who have a contract with LLW Repository Ltd) to identify and deliver appropriate and effective waste management solutions.

8,700m³ of LLW was diverted from disposal at the LLWR by the end of August. WMS have also supported Waste Producers on a number of complex projects including: Sellafield’s WAGR boxes, Magnox’s Fuel Element Debris, Treated Radwaste Store drums, Harwell Liquid Effluent Treatment Plant and Chapelcross top ducts projects; opening of waste treatment routes for Rolls-Royce and Vulcan Naval Reactor Test Establishment.



National Programme

LLW Repository Ltd leads the implementation of the Strategy on behalf of government the Nuclear Decommissioning Authority (NDA) through the National Programme Office.

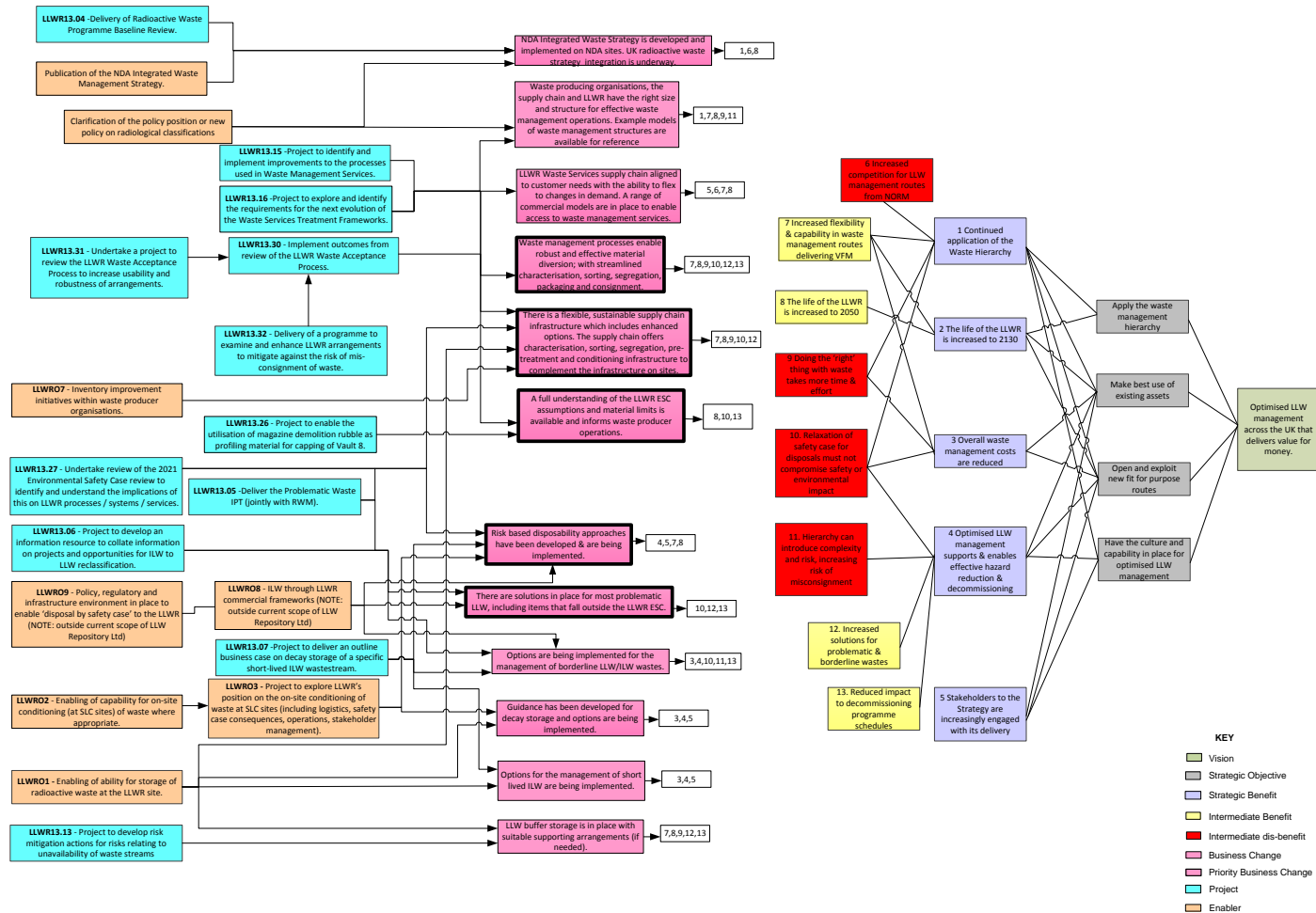
The National Programme seeks to support improvements in the practices and arrangements for LLW management across the UK, in line with the Strategy. The National Programme also supports waste consignors in the implementation of the Strategy. This involves programme management (managing a governance framework, producing / disseminating reports on programme performance, managing schedules and risk / benefit management) and working with stakeholders to enable the sharing of good practice and learning.

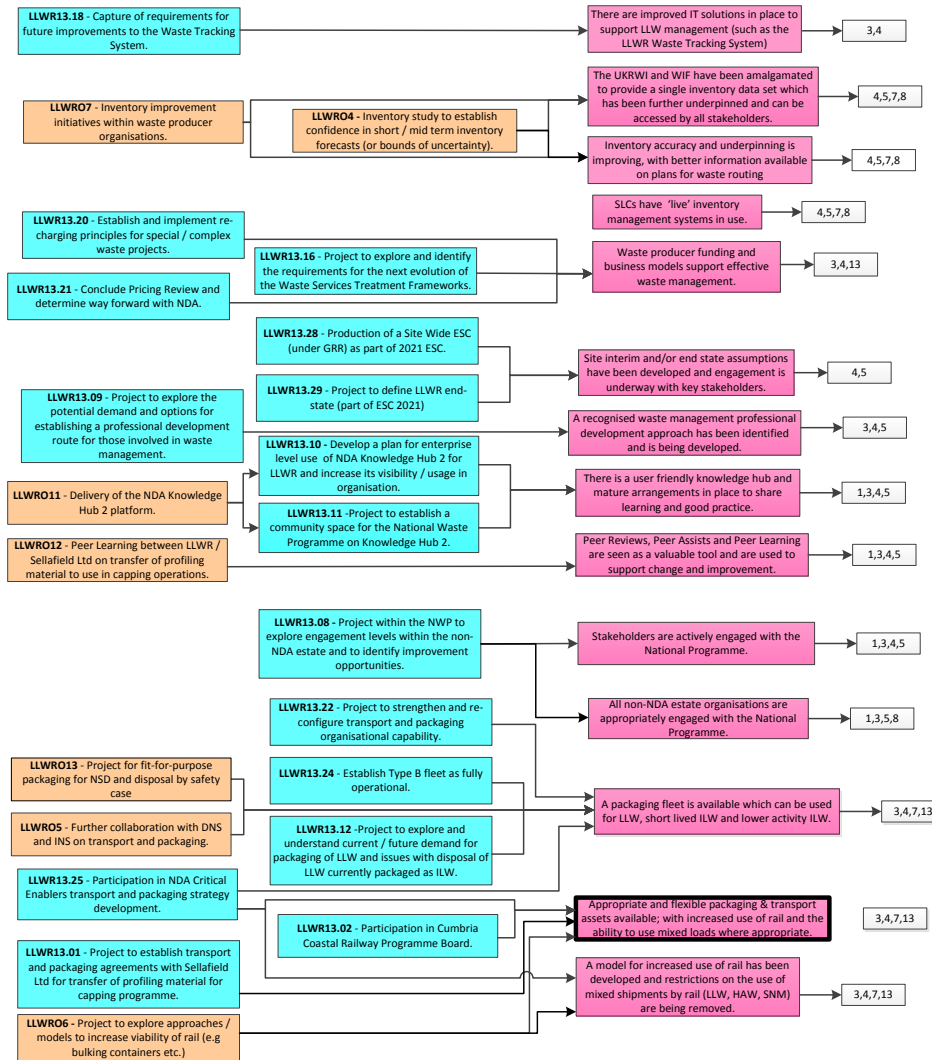
The NWP has a range of projects to deliver in 2018/19, involving work with a broad set of stakeholders. The projects include a review of conventional waste industry techniques; a project to review the availability of suitable LLW packages to 250; the collation of ILW to LLW reclassification opportunities; and the development of an outline business case for decay storage. The NWP also continues to participate in the Problematic Waste Integrated Project Team with the NDA and Radioactive Waste Management Ltd (RWM). The NWP continues to work with RWM on the development of the Integrated Radioactive Waste Programme, which is currently undertaking a Baseline Review. The aim of the review is to capture a 'snapshot-in-time' of the radioactive waste industry across the radiological spectrum, and represents a significant piece of the 2018/19 programme of work, with the NWP delivering 5 projects to inform the study.



Section 2 – LLW Repository Ltd Transformational Activities

2.1 NWP Benefit Map





- KEY**
- Vision
 - Strategic Objective
 - Strategic Benefit
 - Intermediate Benefit
 - Intermediate dis-benefit
 - Business Change
 - Priority Business Change
 - Project
 - Enabler

2.2 Transformational Project List

Transformational projects are those activities that will be undertaken by the SLC which will make a step change in the management of LLW. They are discrete work packages with defined start and end dates, which introduce improvements to work practices to deliver financial and non-financial benefits. Each transformational activity is identified on the Benefit Map as a project.

2.2.1 Transformational Projects – Repository Portfolio

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.01	Project to establish transport and packaging agreements with Sellafield Ltd for transfer of profiling material for capping programme.	<ul style="list-style-type: none"> Appropriate and flexible packaging & transport assets available; with increased use of rail and the ability to use mixed loads where appropriate. 	01/04/2018	01/03/2019
LLWR13.02	Participation in Cumbria Coastal Railway Programme Board.	<ul style="list-style-type: none"> Appropriate and flexible packaging & transport assets available; with increased use of rail and the ability to use mixed loads where appropriate. 	01/03/2018	Ongoing

2.2.2 Transformational Projects – Waste Management Portfolio

National LLW Programme

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.04	Delivery of the Radioactive Waste Baseline Review.	<ul style="list-style-type: none"> NDA Integrated Waste Strategy is developed and implemented on NDA sites. UK radioactive waste strategy integration is underway. 	01/04/2017	31/03/2019
LLWR13.05	Deliver the Problematic Waste IPT (jointly with RWM).	<ul style="list-style-type: none"> There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. Risk based disposability approaches have been developed & are being implemented. There are solutions in place for most problematic LLW, including items that fall outside the LLWR ESC. Options are being implemented for the management of borderline LLW/ILW wastes. 	01/06/2016	31/03/2020

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.06	Project to develop an information resource to collate information on projects and opportunities for ILW to LLW reclassification.	<ul style="list-style-type: none"> Options are being implemented for the management of borderline LLW/ILW wastes. There are solutions in place for most problematic LLW, including items that fall outside the LLWR ESC. 	01/04/2018	31/03/2019
LLWR13.07	Project to deliver an outline business case on decay storage of a specific short-lived ILW wastestream.	<ul style="list-style-type: none"> Risk based disposability approaches have been developed & are being implemented. Options are being implemented for the management of borderline LLW/ILW wastes. Options for the management of short lived ILW are being implemented. 	01/04/2018	28/02/2019
LLWR13.08	Project within the NWP to explore engagement levels within the non-NDA estate and to identify improvement opportunities.	<ul style="list-style-type: none"> All non-NDA estate organisations are appropriately engaged with the National Programme. Stakeholders are actively engaged with the National Programme. 	01/04/2018	31/03/2019
LLWR13.09	Project to explore the potential demand and options for establishing a professional development route for those involved in waste management.	<ul style="list-style-type: none"> A recognised waste management professional development approach has been identified and is being developed. 	01/04/2019	31/12/2019

National Waste Programme

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.11	Project to establish a community space for the National Waste Programme on Knowledge Hub 2.	<ul style="list-style-type: none"> There is a user friendly knowledge hub and mature arrangements in place to share learning and good practice. 	01/09/2018	31/03/2019
LLWR13.12	Project to explore and understand current / future demand for packaging of LLW and issues with disposal of LLW currently packaged as ILW.	<ul style="list-style-type: none"> A packaging fleet is available which can be used for LLW, short lived ILW and lower activity ILW. 	01/04/2018	31/01/2019
LLWR13.13	Project to develop risk mitigation actions for risks relating to unavailability of waste streams	<ul style="list-style-type: none"> LLW buffer storage is in place with suitable supporting arrangements (if needed). 	02/01/2019	31/03/2020

Waste Management Services

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.15	Project to identify and implement improvements to the processes used in Waste Management Services.	<ul style="list-style-type: none"> Waste producing organisations, the supply chain and LLWR have the right size and structure for 	01/11/2017	31/03/2019

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.16	Project to explore and identify the requirements for the next evolution of the Waste Services Treatment Frameworks.	<p>effective waste management operations. Example models of waste management structures are available for reference</p> <ul style="list-style-type: none"> • LLWR Waste Services supply chain aligned to customer needs with the ability to flex to changes in demand. A range of commercial models are in place to enable access to waste management services. • Waste management processes enable robust and effective material diversion; with streamlined characterisation, sorting, segregation, packaging and consignment. • There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. 	01/04/2018	31/03/2019
LLWR13.18	Capture of requirements for future improvements to the Waste Tracking System.	<ul style="list-style-type: none"> • There are improved IT solutions in place to support LLW management (such as the LLWR Waste Tracking System) 	01/09/2018	31/03/2019

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.20	Establish and implement re-charging principles for special / complex waste projects.	<ul style="list-style-type: none"> Waste producer funding and business models support effective waste management. 	01/04/2018	31/03/2019
LLWR13.21	Conclude Pricing Review and determine way forward with NDA		01/04/2018	31/03/2019
LLWR13.22	Project to strengthen and re-configure transport and packaging organisational capability.	<ul style="list-style-type: none"> A packaging fleet is available which can be used for LLW, short lived ILW and lower activity ILW. 	01/04/2018	31/03/2019
LLWR13.24	Establish Type B fleet as fully operational.		01/04/2017	12/12/2018
LLWR13.25	Participation in NDA Critical Enablers transport and packaging strategy development.	<ul style="list-style-type: none"> A packaging fleet is available which can be used for LLW, short lived ILW and lower activity ILW. Appropriate and flexible packaging & transport assets available; with increased use of rail and the ability to use mixed loads where appropriate. A model for increased use of rail has been developed and restrictions on the use of mixed shipments by rail (LLW, HAW, SNM) are being removed. 	01/11/2017	31/03/2019

2.2.3 Transformational Projects – Functional Portfolio

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.10	Develop a plan for enterprise level use of NDA Knowledge Hub 2 for LLWR and increase its visibility / usage in organisation.	<ul style="list-style-type: none"> There is a user friendly knowledge hub and mature arrangements in place to share learning and good practice. 	01/04/2018	31/03/2019
LLWR13.26	Project to enable the utilisation of magazine demolition rubble as profiling material for capping of Vault 8.	<ul style="list-style-type: none"> A full understanding of the LLWR ESC assumptions and material limits is available and informs waste producer operations. There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. Risk based disposability approaches have been developed & are being implemented. 	01/06/2018	01/02/2021
LLWR13.27	Undertake review of the 2021 Environmental Safety Case to identify and understand the implications of this on LLWR processes / systems / services.	<ul style="list-style-type: none"> There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. Risk based disposability approaches have been developed & are being implemented. 	01/04/2017	03/05/2021

Project Number	Activity	Contributes to the Delivery of which Business Change/s?	Start Date	End Date
LLWR13.28	Production of a Site Wide ESC (under GRR) as part of 2021 ESC.	<ul style="list-style-type: none"> Site interim and/or end state assumptions have been developed and engagement is underway with key stakeholders. 	01/04/2017	03/05/2021
LLWR13.29	Project to define LLWR end-state (part of ESC 2021)		01/04/2017	31/12/2018
LLWR13.30	Implement outcomes from review of the LLWR Waste Acceptance Process.	<ul style="list-style-type: none"> Waste producing organisations, the supply chain and LLWR have the right size and structure for effective waste management operations. Example models of waste management structures are available for reference LLWR Waste Services supply chain aligned to customer needs with the ability to flex to changes in demand. A range of commercial models are in place to enable access to waste management services. Waste management processes enable robust and effective material diversion; with streamlined characterisation, sorting, segregation, packaging and consignment. There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. A full understanding of the LLWR ESC assumptions and material limits is available and informs waste producer operations. 	15/05/2018	14/11/2019
LLWR13.31	Undertake a project to review the LLWR Waste Acceptance Process to increase usability and robustness of arrangements.		11/05/2018	14/05/2019
LLWR13.32	Delivery of a programme to examine and enhance LLWR arrangements to mitigate against the risk of mis-consignment of waste.		11/05/2018	02/06/2022

Section 3 – Non-Resourced Opportunities

Opportunities are those specific step change projects that are not within the current scope of work but which could be undertaken either if funding became available or if internal or collaborative resource could be identified to support the project; and which would further optimise the management of LLW. These may be identified as enablers on the Benefit Map.

Opp. No.	Activity	Benefit	Duration	Resources Required	Status
LLWRO1	Enabling of ability for storage of radioactive waste at the LLWR site.	<ul style="list-style-type: none"> There is a flexible, sustainable supply chain infrastructure which includes enhanced options. LLW buffer storage is in place with suitable supporting arrangements (if needed). 	1 Year	Funding, people, priority.	Not planned (can be executed on an ad-hoc basis as needed).
LLWRO2	Enabling of capability for on-site conditioning (at SLC sites) of waste where appropriate.	<ul style="list-style-type: none"> Risk based disposability approaches have been developed & are being implemented. 	3-5 Years	Funding, people, priority, SLC resources.	Not yet planned.
LLWRO3	Project to explore LLWR's position on the on-site conditioning of waste at SLC sites (including logistics, safety case consequences, operations, stakeholder management).		1-3 Years	Funding, people, priority, SLC resources.	Not yet planned.

Opp. No.	Activity	Benefit	Duration	Resources Required	Status
LLWRO4	Inventory study to establish confidence in short- / mid-term inventory forecasts (or bounds of uncertainty).	<ul style="list-style-type: none"> The UKRWI and WIF have been amalgamated to provide a single inventory data set which has been further underpinned and can be accessed by all stakeholders. Inventory accuracy and underpinning is improving, with better information available on plans for waste routing 	1 Year	Funding, people, priority, SLC resources.	Not yet planned.
LLWRO5	Further collaboration with DNS and INS on transport and packaging.	<ul style="list-style-type: none"> A packaging fleet is available which can be used for LLW, short lived ILW and lower activity ILW. 	1-3 Years	Funding, people, priority, DNS / INS resources.	Not yet planned.
LLWRO6	Project to explore approaches / models to increase viability of rail (e.g bulking containers etc.)	<ul style="list-style-type: none"> Appropriate and flexible packaging & transport assets available; with increased use of rail and the ability to use mixed loads where appropriate. A model for increased use of rail has been developed and restrictions on the use of mixed shipments by rail (LLW, HAW, SNM) are being removed. 	1 Year	Funding, people, priority, DNS / INS resources.	Not yet planned.

Opp. No.	Activity	Benefit	Duration	Resources Required	Status
LLWRO7	Inventory improvement initiatives within waste producer organisations	<ul style="list-style-type: none"> There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. 	1 Year	Funding, people, priority, SLC resources.	Not yet planned.
LLWRO8	ILW through LLWR commercial frameworks (NOTE: outside current scope of LLW Repository Ltd).	<ul style="list-style-type: none"> Risk based disposability approaches have been developed & are being implemented. There are solutions in place for most problematic LLW, including items that fall outside the LLWR ESC. Options are being implemented for the management of borderline LLW/ILW wastes. 	2-5 Years	Funding, people, priority, SLC resources.	Not yet planned.

Opp. No.	Activity	Benefit	Duration	Resources Required	Status
LLWRO9	Policy, regulatory and infrastructure environment in place to enable 'disposal by safety case' to the LLWR (NOTE: outside scope of LLW Repository Ltd).	<ul style="list-style-type: none"> Risk based disposability approaches have been developed & are being implemented. Options are being implemented for the management of borderline LLW/ILW wastes. Options for the management of short lived ILW are being implemented. 	2-5 Years	Priority, funding, people, scope.	Not yet planned.
LLWRO12	Peer Learning between LLWR / Sellafield Ltd on transfer of profiling material to use in capping operations.	<ul style="list-style-type: none"> Peer Reviews, Peer Assists and Peer Learning are seen as a valuable tool and are used to support change and improvement. 	3 Months	Funding, people, priority.	Not yet planned.

Appendix 1 – 5 Year Forecast

Waste forecast assumptions:

- The forecast is based on current funding availability and budget allocation within LLW Repository Ltd.
- Forecast for FY2018/19 is based on an assumption that LLW Repository Ltd will receive funding equivalent to FY2017/18 and that budget allocation within LLW Repository Ltd is broadly the same as within FY2017/18.



Waste Forecasting Form

	Year: 2018													Year: 2019													Year					
	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12	Annual	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12	Annual	2020	2021	2022			
	01/04/2018 - 28/04/2018	29/04/2018 - 26/05/2018	27/05/2018 - 30/06/2018	01/07/2018 - 28/07/2018	29/07/2018 - 25/08/2018	26/08/2018 - 30/09/2018	30/09/2018 - 27/10/2018	28/10/2018 - 24/11/2018	25/11/2018 - 30/12/2018	30/12/2018 - 26/01/2019	27/01/2019 - 23/02/2019	24/02/2019 - 31/03/2019	0.00	01/04/2019 - 27/04/2019	28/04/2019 - 25/05/2019	26/05/2019 - 29/06/2019	30/06/2019 - 27/07/2019	28/07/2019 - 24/08/2019	25/08/2019 - 29/09/2019	29/09/2019 - 26/10/2019	27/10/2019 - 23/11/2019	24/11/2019 - 28/12/2019	29/12/2019 - 26/01/2020	27/01/2020 - 23/02/2020	24/02/2020 - 31/03/2020	0.00	Annual Total	Annual Total	Annual Total			
Metallic Waste Treatment:																																
Raw Weight Treated Onsite (te)													0.00													0.00						
Raw Weight Treated Offsite via LLWR Framework (te)								11.0	5.0	5.0	29.0	29.0	79.0													0.00						
Raw Weight Treated Offsite via direct contracts (te)													0.00													0.00						
Raw Weight Re-categorised as Out of Scope ¹ (te)													0.00													0.00						
Combustible Waste Treatment:																																
Raw Volume Treated Onsite (m ³)													0.00													0.00						
Raw Volume Treated Offsite via LLWR Framework (m ³)								40.0	40.0	10.0	10.0	10.0	120.0													24.00						
Raw Volume Treated Offsite via direct contracts (m ³)													0.00													0.00						
Raw Volume Re-categorised as Out of Scope ¹ (m ³)													0.00													0.00						
VLLW/ALLW Disposal:																																
VLLW/ALLW Disposed Onsite (Packaged) (m ³)													0.00													0.00						
VLLW/ALLW Disposed to Landfill via LLWR Framework (Packaged) (m ³)										20.0			20.0									2.0				2.00		2.0	2.0	2.0		
VLLW/ALLW Disposed to Landfill via direct contracts (Packaged) (m ³)													0.00													0.00						
Raw Volume Re-categorised as Out of Scope ¹ (m ³)													0.00													0.00						
Supercompactable Waste Treatment:																																
TC19 - 210 litre Drums (m ³)													0.00													0.00						
TC05 - Type 0075 ISO Skips (m ³)													0.00													0.00						
Other Container Types ² (m ³)													0.00													0.00						
Low Level Waste Disposal:																																
TC01 - Half Height Container (No.)							2.0				1.0	1.0	4.00									1.0				1.00		1.0				
TC03 - Third Height Container (No.)													0.00													0.00						
TC08 - WAMAC Product ISO Container (No.)													0.00													0.00						
Other Container Types ² (No.)													0.00													0.00						
Other Container Types ² (No.)													0.00													0.00						
Out of Scope																																
Out of Scope Waste Disposed Onsite (Packaged) ³ (m ³)													0.00													0.00						
Out of Scope Waste Disposed to Landfill via LLWR Framework (Packaged) ³ (m ³)													0.00													0.00						
Out of Scope Waste Disposed to Landfill via direct contracts (Packaged) ³ (m ³)													0.00													0.00						
ILW - LLW Recategorisation⁴																																
Raw volume ILW re-categorised as LLW (m ³)													0.00													0.00						
LLW Repository Ltd Packaging Services																																
Container Manufacture:																																
TC01 - Half Height ISO Container (No.)													0													0						
TC01 - MEB Containers (No.)													0													0						
TC01R - Re-usable Half Height ISO Container (No.)							1						1													0						
TC02 - Sillage Lifting Frame - S2 (No.)													0													0						
TC02 - Sillage Lifting Frame - S3 (No.)													0													0						
TC03 - Third Height ISO Container (No.)													0													0						
TC08 - WAMAC Product ISO Container (No.)													0													0						
TC08 - WAMAC Product ISO Container (No Rails) (No.)													0													0						
TC14 - IP-2 Drums (No.)													0													0						
TC19 - Drums (No.)													0													0						
Pactec Bags (No.)													0													0						
Container Hire:																																
TC02 - Re-usable Half Height ISO Container (No.)													0													0						
TC02 - Sillage Lifting Frame - S2 (No.)													0													0						
TC02 - Sillage Lifting Frame - S3 (No.)													0													0						
TC05 - Multi Use ISO Skip Container (No.)													0													0						
TC11 - SSP Transport System (No.)													0													0						
Novapak Pair - Inner and Outer (No.)													0													0						
Novapak Transport Frame (No.)													0													0						
TN Gemini (No.)													0													0						
Other services:																																
SQE Inspection Service (No.)													0													0						
Transport Services (No.)													0													0						
Spares Supply Service (No.)													0													0						

Notes:

- This refers to waste which was previously assumed to be either activated or contaminated to LLW levels but through either assurance monitoring or further characterisation is likely to be Out of Scope.
- Please specify the proposed container type from the list of approved containers in the Waste Acceptance Criteria.
- This section should contain details of waste which has been processed which was never activated or contaminated to LLW levels.
- Please provide volumes of ILW that will be re-categorised to LLW. This waste must be in the current inventory as ILW and must be waste that has been subject to either segregation, further characterisation or treatment. Please use the comments field to support this data.

Appendix 2 – Benefits

Joint Waste Management Plans Appendix 2 Benefits Realisation Spreadsheet

Summary of JWMP Benefits											
	Project no.	Project Description	units (te, m3)	What (M, C, V, O)	2018/19	2019/20	Year			Total	
					Year 1	Year 2	2020/21 Year 3	2021/22 Year 4	2022/23 Year 5		
Delivery	M C V O	Metals diversion (onsite, offsite)	units		79	0	0	0	0	79	
		Combustible diversion (on site, off site)	m3		120	24	0	0	0	144	
		VLLW diversion (onsite, offsite)	m3		20	2	2	2	2	28	
		Problematic wastes treated	m3		0	0	0	0	0	0	
Savings	Metals	Quantity	(te)		79	0	0	0	0	79	
		Treatment Cost Norm	(£/te)		£3,500	£3,500	£3,500	£3,500	£3,500		
		Total Cost of Treatment	(£)		£402,497	£0	£0	£0	£0	£0	£402,497
		HHISO Equivalent Quantity	(HHISOs)		8	0	0	0	0	8	
	Disposal Cost Norm	(£/HHISO)		£75,797	£78,030	£80,341	£82,733	£85,208			
	Total Cost of Disposal	(£)		£677,975	£0	£0	£0	£0	£0	£677,975	
	Metallic - Saving from Diversion	(£)		£275,478	£0	£0	£0	£0	£0	£275,478	
	Combustible	Quantity	(m ³)		120	24	0	0	0	144	
		Treatment Cost Norm	(£/m ³)		£1,350	£1,350	£1,350	£1,350	£1,350		
		Total Cost of Treatment	(£)		£194,400	£39,000	£0	£0	£0	£233,400	
		210l Drum Equivalent Quantity	(Drums)		600	120	0	0	0	720	
	Supercompaction Treatment Cost Norm	(£/Drum)		£854	£877	£901	£925	£951			
Total Cost of Disposal	(£)		£539,596	£110,787	£0	£0	£0	£0	£650,384		
Combustible - Saving from Diversion	(£)		£345,196	£71,787	£0	£0	£0	£0	£416,984		
VLLW	Quantity	(m ³)		20	2	2	2	2	28		
	VLLW Disposal Cost Norm	(£/m ³)		£500	£500	£500	£500	£500			
	Total Cost of VLLW Disposal to Landfill	(£)		£16,200	£2,100	£2,100	£2,100	£2,100	£24,600		
	HHISO Equivalent Quantity	(HHISOs)		2	1	1	1	1	6		
Disposal Cost Norm	(£/HHISO)		£64,997	£67,230	£69,541	£71,933	£74,408				
Total Cost of Disposal	(£)		£147,594	£76,630	£78,941	£81,333	£83,808	£0	£468,305		
Saving from Diversion	(£)		£131,394	£74,530	£76,841	£79,233	£81,708	£0	£443,705		
Benefits	Benefits				2018/19	2019/20	Year			5 Year Total	
					Year 1	Year 2	2020/21 Year 3	2021/22 Year 4	2022/23 Year 5		
	NWPB1	NWP Benefit 1 - Repository Years Extension	years		0.004	0.001	0.000	0.000	0.000	0.006	
	NWPB2	NWP Benefit 2 - Cost Saving	(£)		£752,068	£146,317	£76,841	£79,233	£81,708	£1,136,167	
	NWPB3	NWP Benefit 3 - CO ₂ Saving	Te CO ₂		346.11	30.68	2.36	2.36	2.36	383.87	
	NWPB3	NWP Benefit 3 - Problematic Waste Reduction	m ³		0	0	0	0	0	0	
NWPB4	NWP Benefit 4 - Public Recognition	-				N/A					